

Providing a service registry and repository to help you get the most business value from your SOA.



Service oriented architecture (SOA) has the potential to drive business flexibility, performance and innovation by better aligning your information technologies to your business objectives. Maximizing this potential depends on how well you manage the services in your SOA throughout their life cycle.

IBM WebSphere® Service Registry and Repository is an industrial-strength tool that helps you get the most business value from your SOA by enabling better management and governance of your services. Through its robust registry and repository capabilities and its integration with IBM SOA Foundation,

an integrated, open-standards-based set of software, best practices and patterns for SOA, WebSphere Service Registry and Repository can be an essential foundational component of your SOA implementation.

Store, access and manage information to support a successful SOA

The WebSphere Service Registry and Repository system enables you to store, access and manage information about the services in your SOA, commonly referred to as service metadata. You can use this information to select, invoke, govern and reuse services as part of a successful SOA. WebSphere Service Registry and Repository also enables you to store information about services in your systems, or in other organizations' systems, that you already use, that you plan to use or that you want to be aware of.

WebSphere Service Registry and Repository includes:

- A service registry *that contains information about services, such as the service interfaces, its operations and parameters*
- A metadata repository *that has the robust framework and extensibility to suit the diverse nature of service usage*

A critical component of your SOA

The robust capabilities of WebSphere Service Registry and Repository make it a critical deployment component of SOA projects. These capabilities include:

- *Publish and Find capabilities for greater visibility and reuse*
- *Agility to manage dynamic and efficient access to services information at run time*
- *Management capabilities for policies, classifications, versioning and use of services*
- *Governance capabilities to support services throughout their life cycle, helping to ensure that they maintain their vitality and usefulness to your business*

Publish and find for greater reuse

The *publish* and *find* capabilities of WebSphere Service Registry and Repository help promote asset reuse in SOA projects by providing greater visibility of and easier access to existing services. They also expose redundant or inefficient services.

For example, when a request for service need is approved, you can query WebSphere Service Registry and Repository searches to determine if the service is available. If a service exists, the service owner is contacted to approve the reuse of the service. If the service requires modification, the owner can choose whether to permit the alteration after doing an impact

analysis with the metadata in the service registry repository. If the alteration is approved, a new version of the service is published to WebSphere Service Registry and Repository, and a new owner can be designated to support and maintain it. Finally, if the service does not exist, a new service-development request is initiated and published in WebSphere Service Registry and Repository, and the community is informed to prevent duplicate efforts.

Greater agility for your SOA

WebSphere Service Registry and Repository helps improve the *agility* of your SOA. It identifies users of metadata and notifies them when changes occur. Its role-based access such as administrator, developer, architect and analyst, contributes to proper governance of your SOA. For runtime environments, the service registry and repository enables dynamic, efficient and security-rich access to services information by enabling service endpoint selection, service availability management and policy enforcement.

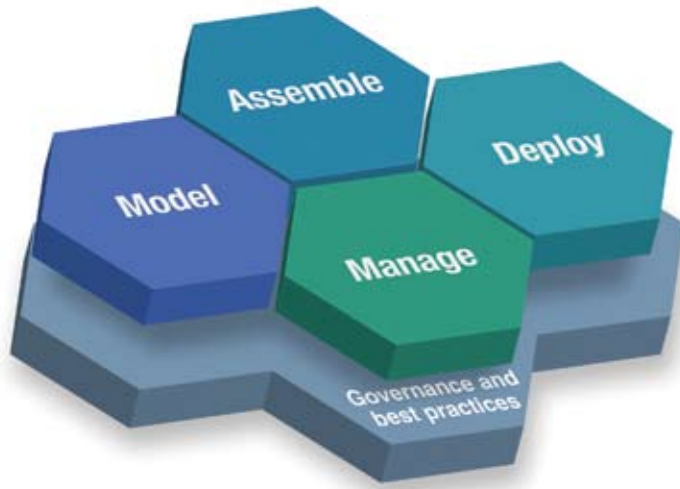
For service endpoint selection, an enterprise service bus (ESB) mediation looks up requester metadata and searches WebSphere Service Registry and Repository for candidate provider endpoints. The mediation applies a selection algorithm and routes the request to the selected endpoint. However, if the provider endpoint doesn't respond because of a failure,

the ESB mediation can search WebSphere Service Registry and Repository for other services that might meet requirements and are approved for use. For policy enforcement, a policy infrastructure component uses policies stored in the service registry and repository, and the request is either forwarded or rejected based on these policies.

Help maximize service efficiency and resilience

Management capabilities available with WebSphere Service Registry and Repository enable you to manage service metadata information, as well as service interactions, dependencies and redundancies. You can classify services into meaningful groupings based on business objectives, manage policies for service usage and monitor how services are changed and versioned. And you can analyze service usage, history and business impact to promote and encourage optimal services usage.

For example, after a service is developed and deployed, WebSphere Service Registry and Repository shares service data with other operational data stores. You can determine how services are going to be used and how they interact—and indicate these parameters in the repository. Then, WebSphere Service Registry and Repository can keep you informed if services perform outside these parameters, enabling you to more effectively monitor and manage quality-of-service objectives.



WebSphere Service Registry and Repository can be a critical component in the SOA life cycle.

Govern services throughout their life cycles

WebSphere Service Registry and Repository provides governance capabilities that can help you organize and discover services assets, govern access and monitor service vitality. Because these capabilities span the entire life cycles of services, you can manage changes to services and create policies for publishing, using and retiring them.

For example, when you develop a service, its artifacts are stored in WebSphere Service Registry and Repository. Governance processes then promote the service from testing to production, and this is recorded in WebSphere Service Registry and

Repository. After the service has been deployed and used, governance processes can determine when the service is no longer needed, and retire it, without affecting subscribers. Metadata in WebSphere Service Registry and Repository is used to assess the impact of changes to services.

Playing a vital role in IBM SOA Foundation

WebSphere Service Registry and Repository plays a major role in the SOA life cycle.

Model

During service modeling, you can use WebSphere Service Registry and Repository to create or reuse service taxonomies, vocabularies and XML schemas.

Assemble

During service development or assembly, you can use WebSphere Service Registry and Repository to locate services for reuse and to enable service composition, such as creating new applications and services from existing ones.

Deploy

When your SOA is deployed, runtime environments such as ESB use the metadata published in WebSphere Service Registry and Repository to enable endpoint selection, resolution and policy enforcement. This capability enables you to dynamically optimize service interactions in your SOA.

Manage

To manage services leveraging system-management practices, such as Information Technology Infrastructure Library (ITIL) processes, and change- and configuration-management databases (CCMDB) storing information about service interactions such as mediations, you can use WebSphere Service Registry and Repository to capture and assess the performance of services against business and operational performance objectives.

The service registry forms the core that feeds the overall SOA governance technology that underpins the SOA framework and helps you manage your overall SOA infrastructure.

A valuable component of your SOA

Today, most service registries provide basic publishing and discovery of service descriptions. Some solutions might offer basic repositories, but they do not address the overall service metadata aspects in a repository. They typically do not include governance capabilities that enable you to manage the end-to-end life cycle of all of your services artifacts. WebSphere Service Registry and Repository overcomes these deficiencies. Its robust, industrial-strength capabilities help you efficiently manage access to and governance of services. Standard registry and repository functions for the entire software life cycle, well integrated with IBM SOA Foundation, make WebSphere Service Registry and Repository a valuable component of your SOA. Regardless of the level of SOA maturity in your enterprise, WebSphere Service Registry and Repository can bring immediate benefits that can help accelerate your adoption of an SOA approach.

For more information

To learn more about IBM WebSphere Service Registry and Repository, contact your IBM representative or IBM Business Partner.

ibm.com/software/integration/wsrr

To learn more about IBM SOA Foundation and the SOA life cycle, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/soa

To learn more about IBM SOA Governance, visit:

ibm.com/soa/gov

To join the Global WebSphere Community, visit:

www.websphere.org



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Route 100
Somers, NY 10589
U.S.A.

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